



Households after a natural disaster

The CMIE's CPHS data breaks the preconception of devastation and impoverished households being pushed to spending less

Recent research has uncovered new insights into a major natural disaster, the Chennai floods of 2015. Curiously, there was not much of a change in household income. But household expenditure surged for about a year after the floods. There were sharp increases in expenses on health and on fuel/power. After this period, households reversed themselves and started spending less; they were probably repairing their balance sheets. The expenditure surge was smaller for the less affluent, even though the damage that they suffered is likely to have been worse. More access to borrowing would have helped.

Natural disasters are important phenomena in the life of a nation. Most of us will experience one or more major natural disasters within our life. There is a need to know more about what happens in a local economy after a natural disaster. Traditionally, researchers have camped in a disaster-affected zone and undertaken measurement, but there are two limitations. We have not measured conditions before the disaster, and we are not simultaneously measuring conditions in an unaffected area, which can be used as the comparator (also called “the control”).

New possibilities for measurement flow from the Centre for Monitoring Indian Economy's (CMIE's) “Consumer Pyramids Household Survey (CPHS)”, which measures 170,000 households every four months. Assuming a disaster typically falls in between two survey dates, we get a four-month peri-

od in which each household is met before the disaster; after the natural disaster takes place, the same households are met again. This measurement is done all over India, so it is possible to identify controls.

In a recent paper (<http://bit.ly/chennai2015>), Ila Patnaik, Renuka Sane, and I study the Chennai floods of 2015, as a test case of this new approach, to measure the impact of natural disasters upon households.

The first question is about income. At first blush, we may think that many firms were disrupted during the floods, streetside vendors could no longer ply their trade, and thus incomes would go down. But we should look deeper. Disruption of kitchens meant

that vendors selling cooked food got a surge in demand. The moment the waters receded, all households were engaged in repair and reconstruction. The government spent a lot of money — about ₹2,000 per head — on relief and reconstruction. All these enhanced expenditures constituted a large demand shock in the local economy, which counteracted the flood-related disruption. As a consequence, the overall change in household income was about zero.

The second question is about expenditure. The traditional preconception is that there is devastation after a natural disaster, and impoverished households are pushed to spending less. This is not what happened in the data. Expenditure surged dramatically, by 32 per cent, during and immediately after the floods. Households were

spending more on food, health care, and, most importantly, fuel/power.

In about 10 months, expenditures came back to normal, and after that, spending actually dropped to below the pre-flood levels, as households went back to repairing their balance sheets.

The richest households would have experienced the least destruction of housing stock or assets, and they are also likely to come through relatively unscathed on ill health when the upper floors of a house are not flooded. The richest households also have access to liquid assets and borrowings. So, the ideal response that we might see, for an affluent household, is a short surge of expenditure after which normalcy is restored.

The harm caused by a flood for poor people is greater, through the destruction of housing and assets, and health impact. Ideally, a bigger consumption surge is required after the event to repair the damage. However, in the data, we see a smaller consumption surge for the poor. This may reflect financial constraints, and greater hardships for the poor.

Finance should be a major part of the resilience of households when faced with a natural disaster. However, in the data for Chennai, we see a certain retreat from finance: Fewer households borrowed, saved or purchased assets after the flood. This raises concerns about the extent to which the Indian financial system is able to perform its functions in that moment of need when the average household requires finance the most. It is important to diagnose and identify the policy impediments, which are holding back profit-motivated financial firms from surging the lending to households in a disaster-affected area such as Chennai. These difficulties are consistent with the broader picture of a malfunctioning financial system.

While the floods in Chennai were a terrible event for persons there, at a conceptual level, the post-disaster performance was perhaps as good as it can get in India. Tamil Nadu has high state capacity, Chennai is one of the most affluent places in India, the media reported on the events with great interest, which helped ensure that the government swung into action for relief and reconstruction with alacrity and heft. In other locations in India, we may perhaps expect outcomes to be a bit worse, on account of inferior state capacity, lower household affluence, a reduced presence of financial firms, and reduced scrutiny by the media. The evidence that we see about Chennai can perhaps be interpreted as the frontier and as the best outcomes that are obtained in India when faced with a natural disaster of the magnitude of the 2015 Chennai floods.

The significance of this work lies not just in understanding what happened after the floods in Chennai in 2015. The measurement strategy that has been developed here is general, and not just about the Chennai floods of 2015. Many researchers will be able to conduct such studies by applying these methods, through which a new body of knowledge can develop on understanding what happens to households in India when faced with a natural disaster. Direct comparison between different natural disasters will, however, be limited by the fact that no two shocks are quite the same. As an example, the floods in Kerala were not comparable with the floods in Chennai.



SNAKES & LADDERS

AJAY SHAH